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ABSTRACT

To determine the frequency of simple main ideas (explicit statements found in a single T-unit), delayed completion main ideas (explicit statements using no more than two T-units), and inferred main ideas in social studies textbooks, 100 passages from second, fourth, sixth, and eighth grade textbooks were analyzed. Results of the study revealed that only 27% of the passages contained simple section main ideas, 44% of all paragraphs contained simple main ideas, and 27% of all paragraphs began with simple main idea statements. Taken collectively, the results suggest that readers of these textbooks must rely heavily on their inferential comprehension ability to identify main ideas. These findings indicate that (1) teachers need to provide students with adequate instruction in comprehending main ideas, especially implicit main ideas; (2) educators and researchers must provide teachers with effective comprehension strategies; and (3) publishers must be more diligent in requiring authors of content textbooks to directly state section and paragraph main ideas. (MM)

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The Frequency and Placement of Main Ideas in Children's Social Studies Textbooks: A Modified Replication of Braddock's Research on Topic Sentences

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The Frequency and Placement of Main Ideas in Children's Social Studies Textbooks: A Modified Replication of Braddock's Research on Topic Sentences

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Research indicates that children have considerable difficulty comprehending main ideas in expository prose (e.g., Baumann, 1981, 1983a; Dunn, Matthews, & Bieger, 1979; Taylor, 1980; Tierney, Bridge, & Cera, 1978-79; Winograd, in press; see a review by Baumann, 1982). Given all the interest in main idea comprehension, it is somewhat surprising that no researcher has asked the question, "How pervasive is the phenomenon of main idea in expository reading materials for children?" When one considers that explicitly stated main ideas have been shown to be more comprehensible than implicit main ideas (Aulls, 1975; Kieras, 1978; Baumann, Note 1), and that the initial placement of main ideas also aids main idea comprehension (Kieras, 1980), one would hope that exposition for children would contain a relatively high proportion of explicit main ideas, especially placed at the beginning of paragraphs and selections.

Braddock (1974) examined adult, expository reading materials (essays from periodicals such as The Atlantic, Harper's, and The New Yorker) for the frequency and placement of topic sentences. His analysis revealed that only 30% of all paragraphs presented a simple topic sentence. When he examined the location of topic sentences, he found that only 13% of all the paragraphs in the essays opened with a topic sentence. As Braddock concluded, "It just is not true that most expository paragraphs have topic sentences" (p. 298) and "It is abundantly clear that students should not be told that professional writers usually begin their paragraphs with topic sentences" (p. 301). It was the purpose of this study, therefore, to determine the frequency and placement of main ideas in expository materials written for children (social studies textbooks). Two specific research questions were posed: (1) With what frequency do section and paragraph main ideas occur in social studies textbooks? (2) How frequently do explicit main ideas reside at the beginning of paragraphs in social studies textbooks?

Method

Modifications of Braddock's Methods

Braddock selected 25 essays and segmented each into T-units (Hunt, 1965). Then he subjectively constructed a sentence outline of the major ideas in each essay, "drawing the sentences insofar as possible from the sentences the author has written [omitting] transitional and illustrative statements" (p. 292). These outlines were then examined for the presence of four types of topic sentences: (1) simple topic sentence: "one which is quoted entirely or almost entirely from one T-unit in the passage" (p. 292); (2) delayed-completion topic sentence: "one in which the topic sentence seems to begin in one T-unit but is completed in a later T-unit" (p. 293); (3) assembled topic sentence: "a statement assembled by quotations from throughout the paragraph" (p. 295); and (4) inferred topic sentence: "one which the reader thinks the writer has implied even though the reader cannot construct it by quoting phrases from the original passage" (p. 295).

In pilot analyses, the researcher attempted to translate Braddock's four types of topic sentences into four parallel categories of main ideas at two different levels: main ideas for short sections in the social studies textbooks and main ideas for individual paragraphs within these sections. It was difficult, however, distinguishing between the inferred and assembled types, and the latter was subsequently abandoned. Reducing the categories to three, the following definitions of main ideas (based upon Aulls, 1978, p. 92, definition of main idea) for text sections and individual paragraphs were constructed: (1) Simple main idea-- found in a section/paragraph which possesses a topic sentence identifiable in a single T-unit. (2) Delayed-completion main idea--found in a section/paragraph which contains no simple main idea but one in which no more than two complete or partial T-units are used to construct the main idea. (3) Inferred main idea--a section/paragraph which contains no simple nor delayed-completion main idea but one in which there is a dominant relationship that can be readily inferred from the subordinate topics.

Materials

Social studies textbooks at grades 2, 4, 6, and 8 of five major publishers were selected (Houghton Mifflin, Follett, Holt, Laidlaw, and Ginn). Five passages from texts at each grade level for all five series were selected, a total of 100 passages. Criteria for passage selection consisted of the following: (1) The passages were written in an expository style, as opposed to fictional accounts. (2) The passages were self-contained, coherent selections, beginning and ending with a heading or subheading. (3) Comprehension of the text was not dependent upon graphic or pictorial information.

Procedure

The procedure for identifying main idea types was modeled after Braddock's (1974) technique. The first step involved numbering the paragraphs in each passage. Next, each passage was segmented into T-units. Then, each text was read several times to determine what type of section main idea and corresponding paragraph main ideas were present. In the example text in Table 1, the overall section main idea is inferred, since no simple nor delayed-completion main idea is present. Similarly, the main idea for the first paragraph is also inferred. Paragraph two contains a simple main idea located in the first T-unit, and paragraph four's simple main idea is located in T-unit 4. The main idea in paragraph three is a delayed-completion type, and T-units 3 and 4 are the source of the quoted information. Simple main ideas within paragraphs were labeled beginning if the main idea was contained in the first T-unit, labeled end if it resided in the last T-unit, and labeled middle if it was found in neither the first nor the last T-unit.

Results

Table 2 presents percentages for the three types of section main ideas by grade level of textbook for the 100 passages that were examined. Overall, 27% of section main ideas were simple (i.e., explicit), 6% were delayed-completion, and 67% were inferred. Table 3 presents percentages for the three types of paragraph main ideas. Of the 75 fourth, sixth, and eighth grade passages

that were examined, 44% of the paragraphs contained simple (explicit) main ideas, 30% contained delayed-completion main ideas, and 26% contained inferred main ideas. Table 3 presents the percentage of simple paragraph main ideas occurring at the beginning, middle, and end of paragraphs. Overall, 62% of the simple paragraph main ideas were stated in the first sentence, 25% appeared somewhere in the middle of the paragraph, and 13% were found in the last sentence of the paragraph. These percentages, however, reflect only the placement of main ideas in paragraphs that actually contained simple main ideas. To obtain a clearer picture of the frequency with which simple paragraph main ideas appear at various locations, it is necessary to consider all the paragraphs in the selections. Of the 294 paragraphs that were examined in the fourth, sixth, and eighth grade textbooks, only 80 paragraphs, or 27%, had simple main ideas stated in the first T-unit.

Discussion

Results of the study essentially replicate Braddock's (1974) findings. Specifically, only about one-fourth (27%) of all the passages examined in the social studies textbooks contained explicit (simple) section main ideas (Braddock reported 48%); less than half (44%) of all paragraphs contained explicit (simple) main ideas (Braddock reported 30%); and only about one-fourth (27%) of all paragraphs began with an explicit (simple) main idea statement (Braddock reported 13%). Taken collectively, the results indicate that readers of these social studies textbooks will need to rely quite heavily on their inferential comprehension ability to identify main ideas. The implications of these findings are (1) teachers will need to provide students adequate instruction in how to comprehend main ideas, especially implicit main ideas; (2) teachers' educators and researchers need to provide teachers effective strategies for teaching children to comprehend main ideas; and (3) publishers need to be more diligent in requiring authors of content textbooks to directly state section and paragraph main ideas.

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Table 2

Percentages of Section and Paragraph

Main Idea Types by Grade Level of Textbook

Main Idea Type	Second Grade	Fourth Grade	Sixth Grade	Eighth Grade	Across Grades
Section Main Ideas					
Simple	52	16	20	20	27
Delayed-Completion	24	0	0	0	6
Inferred	24	84	80	80	67
Paragraph Main Ideas					
Simple	-	41	38	52	44
Delayed-Completion	-	38	36	18	30
Inferred	-	21	26	30	26

Table 3

Percentage of Simple Main Ideas Occurring at

The Beginning, Middle, and End of Paragraphs

Location in Paragraph	Fourth Grade	Sixth Grade	Eighth Grade	Across Grades
Beginning	64	49	70	62
Middle	19	40	18	25
End	17	11	12	13

Table 1

Sample Fourth Grade Text and Corresponding Main Idea Analysis

THE IRON SWORD OF THE HITTITES

1 [1]The metal that people depend on most today is iron./ [2]It is not as beautiful as copper or bronze,/ [3]but it is much stronger./ [4]However, iron is harder to take from the rocks./ [5]And it must be hammered at very, very high temperatures./

2 [1]The Hittites were probably the first people to use iron./ [2]The Hittites lived in the mountains near the Black Sea, in what is now Turkey./ [3]At first the Hittites worked with silver and bronze./ [4]They knew about the metal called iron,/ [5]but they had not yet found a way to work with it./

3 [1]Finally the Hittite metalworkers found a way to hammer iron/ [2]so that it would make a sword blade sharper and stronger than bronze./ [3]Soon only the Hittite soldiers had swords made of the new metal./ [4]Iron weapons made the Hittites powerful./ [5]They fought many wars and won many battles./

4 [1]When peace came, the Hittites began to trade their iron weapons./ [2]Other people learned how to make iron./ [3]The knowledge of working with iron spread to people in Asia, North Africa, and southern Europe./ [4]Iron tools and weapons became common all over the ancient world./

Section Main Idea: Inferred: The Hittites developed the iron sword, which made them powerful and influential.

Paragraph Main Ideas:

Paragraph 1: Inferred: The use of iron has advantages and disadvantages.

Paragraph 2: Simple (T-unit 1): "The Hittites were probably the first people to use iron."

Paragraph 3: Delayed-Completion (T-units 3,4): "Soon only the Hittite soldiers had swords made of the new metal". . . [which] "made the Hittites powerful."

Paragraph 4: Simple (T-unit 4): "Iron tools and weapons became common all over the ancient world."

Note: Passage taken from the fourth grade text of the Houghton Mifflin Windows in our World social studies program. Our Home, the Earth, J. M. Oswald, J. R. Chapin, & R. LaRaus (General editor, L. F. Anderson). Boston: Houghton Mifflin, 1980.